

# In The United States Patent and Tradem

In re Application of:

Assignee:

Genentech, Inc.

Inventors:

Phillip W. Berman et al.

Serial No .:

09/103,262

Filed:

June 23, 1998

For:

**METHODS AND** 

COMPOSITIONS FOR

VACCINATION AGAINST

HIV

Group Art Unit: 1648

Examiner:

Budens, R.

Attorney Docket No.: 14918-725 CON4

Certificate of Mailing Under 37 C.F.R. § 1.8

Pursuant to 37 C.F.R. § 1.8, I hereby certify that this paper and all enclosures are being deposited with the United States Postal Service as first class mail on the date indicated below in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C.

Date: May 26, 2000

Type or Print Name of Person Mailing: Gail Ohlsson

# INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. § 1.56, the references listed on the attached Form PTO-1449 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application.

# I. Timing of the Information Disclosure Statement:

This Information Disclosure Statement:

[] Accompanies the new patent application submitted herewith. 37 CFR

[] Is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.

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Docket No.: 14918-725 CON4

§ 1.97(a).

[X] As far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits. In the event, however, that an Office Action has crossed in the mail with this Information Disclosure Statement, the Commissioner is hereby authorized to charge Deposit Account No. 50-1189 for any fees required pursuant to 37 CFR §§ 1.17(p) or 1.17(i)(1).
[] Is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and the Commissioner is hereby authorized to charge Deposit Account No. 50-1189 (Order No. 14918-725 CON4) for the fee (\$240) set forth in 37 CFR § 1.17(p) and any additional required fees.
[] Is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by the fee (\$130) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.
If either of the two immediately preceding paragraphs above referring to a certification are checked, the following "certification" under 37 CFR § 1.97(e) may need to be completed. The undersigned certifies that:
[] Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
[] No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.
[] Copies of all of the items listed on the attached Form PTO-1449 are enclosed.
[ ] Copies of only the following items listed on the attached Form PTO-1449 are enclosed:
[X] Copies of those items which are marked with an asterisk (*) in the attached Form PTO-1449 are not supplied because they were previously cited by or submitted to the Office in a prior Application No.08/226,162, filed April 11, 1994 (now Patent No. 5,674,984) and relied upon in this application for an earlier filing date under 35 U.S.C. § 120, which is a

divisional of 08/101,669 filed on August 2, 1993 (now abandoned), which is a continuation of 07/834,735 filed February 13, 1992 (now abandoned), which is a divisional of 07/504,785 filed April 3, 1990 (now abandoned). See 37 C.F.R. § 1.98(d).

[] Copies of those items which are marked with a double asterisk (\*\*) in the attached Form PTO-1449 are not supplied because they are U.S. patent application(s) and no copy of a U.S. patent application needs to be provided pursuant to 37 C.F.R. § 1.98(a)(2)(iii).

# III. Concise Explanation of Relevance:

[ ] A concise explanation of relevance of the items listed on Form PTO-1449 is not given.

[] A concise explanation of relevance of [some of] the items listed on Form PTO-1449 is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

[X] A concise explanation of relevance of the items listed on form PTO-1449 is given for only non-English language listed item(s). Specifically, the following foreign-language documents are being brought to the attention of the Examiner along with a concise explanation of the relevance of each document, as it is presently understood by the individual designated in 37 C.F.R. § 1.56(c) most knowledgeable about the content of the information in each document:

Reference B10 has been cited in the Japanese counterpart (App. No. 506683/1991) to the present application as relevant to Claims 19-21.

### IV. Conclusion:

Citation of the above documents shall not be construed as:

- 1. an admission that the documents are necessarily prior art with respect to the instant invention;
- 2. a representation that a search has been made, other than as described above; or
- 3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

It is respectfully requested that the Examiner indicate consideration of the cited references by returning a copy of the attached form PTO 1449 with initials or other appropriate marks.

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The Commissioner is hereby authorized to charge Deposit Account No. 50-1189 for any additional fees required in connection with the filing of this Information Disclosure Statement.

Please address all correspondence regarding this communication to the following address:

Emily M. Haliday McCutchen, Doyle, Brown & Enersen, LLP Three Embarcadero Center San Francisco, California 94111 Telephone: (650) 849-4910 Facsimile: (650) 849-4800

Dated: May 26, 2000

Respectfully submitted,

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FORM PTO-1449 (Modified)	ATTY. DOCKET NO.	SERIAL NO.
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### **U.S. PATENT DOCUMENTS**

June 23, 1998

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EXAM'R INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	Subclass	Filing Date If Appropriate
	A1*	4,725,669	2/88	Essex et al.	530	322	
	A2*	5,166,050	11/92	Shriver et al.	435	5	
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	B1*	33320/89	11/89	Australia				
	B2*	65235/90	4/91	Australia				
	B3*	187041	9/86	Europe				
	B4*	0 339 504 A2	11/88	Europe				

# OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

C1*	Allan et al., "Major glycoprotein antigens that induce antibodies in AIDS patients are encoded by
	HTLV-III" Science 228 (4703):1091-1094 (May 1985).
C2*	Anderson et al., "Effect of Dose and Immunization Schedule on Immune Response of Baboons to
	Recombinant Glycoprotein 120 of HIV-1," Jour. of Infectious Diseases, 160(6):960-969 (1989).
 C3*	Arthur et al., "Challenge of Chimpanzees (Pan troglodytes) Immunized with Human Immunodeficiency
	Virus Envelope Glycoprotein gp120," Jour. of Virology 63(12):5046-5053 (1989).

### **EXAMINER**

### DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant(s).

(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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	B7*	WO 90/02196	3/90	PCT	1			
	B8*	WO 91/13906	9/91	PCT				

# OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

C4*	Barin et al., "Virus Envelope Protein of HTLV-III Represents Major Target Antigen for Antibodies in AIDS Patients," Science 228:1094-1096 (1985).
C5*	Barrett et al., "Large-Scale Production and Purification of a Vaccinia Recombinant-Derived HIV-1 gp160 and Analysis of Its Immunogenicity," AIDS Research and Human Retroviruses 5(2):159-171 (1989).
C6*	Berman et al., "Expression and Immunogenicity of the Extracellular Domain of the Human Immunodeficiency Virus Type 1 Envelope Glycoprotein, gp160" Jour. of Virology 63(8):3489-3498 (1989).

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(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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### FORM PTO-1449 (Modified) ATTY. DOCKET NO. SERIAL NO. LIST OF PATENTS AND PUBLICATIONS FOR 14918-725 CON4 09/103,262 APPLICANT(S)' INFORMATION DISCLOSURE **STATEMENT** (Use several sheets if necessary) APPLICANT Phillip W. Berman et al. FILING DATE **GROUP ART UNIT** June 23, 1998 1643 REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS** Filing Date EXAM'R INITIAL Subclass DOCUMENT NUMBER DATE **NAME CLASS** Appropriate A21 A22 A23 A24 A25 A26 A27 A28 A29 A30 FOREIGN PATENT DOCUMENTS EXAM'R TRANSLAT'N Subclass DOCUMENT NUMBER DATE **COUNTRY CLASS** INITIAL. yes no B9\* WO 93/20104 10/93 **PCT** B10 120284/1989 1989 Japan B11 B12 OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.) C7\* Berman et al., "Human immunodeficiency virus type 1 challenge of chimpanzees immunized with recombinant envelope glycoprotein gp120" Proc. Natl. Acad. Sci. USA 85:5200-5204 (1988). Berman et al., "Protection from Genital Herpes Simplex Virus Type 2 Infection by Vaccination with C8\* Cloned Type 1 Glycoprotein D," Science 227:1490-1492 (1985). C9\* Berman et al., "Protection of Chimpanzees From Infection by HIV-1 After Vaccination With Recombinant Glycoprotein gp120 but not gp160," Nature 345:622-625 (1990).

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### U.S. PATENT DOCUMENTS

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# OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

C10*	Celltech "CHO cell rgp120" Certificate of Analysis pp.1-2 (Jan., 1990).
C11*	Chakrabarti et al., "Expression of the HTLV-III envelope Gene by a Recombinant Vaccinia Virus," <i>Nature</i> 320:535-540 (1986).
C12*	Clements et al., "The V3 Loops of the HIV-1 and HIV-2 Surface Glycoproteins Contain Proteolytic Cleavage Sites; A Possible Function in Viral Fusion" AIDS Research and Human Retroviruses 7:3-16 (1991).

### **EXAMINER**

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### FORM PTO-1449 (Modified) ATTY. DOCKET NO. SERIAL NO. LIST OF PATENTS AND PUBLICATIONS FOR 14918-725 CON4 09/103,262 APPLICANT(S)' INFORMATION DISCLOSURE **STATEMENT** (Use several sheets if necessary) APPLICANT Phillip W. Berman et al. PADEUE TER FILING DATE **GROUP ART UNIT** June 23, 1998 1643 REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS** Filing Date Subclass DOCUMENT NUMBER DATE CLASS NAME INITIAL Appropriate A41 A42 A43 A44 A45 A46 A47 A48 A49 A50 FOREIGN PATENT DOCUMENTS TRANSLAT'N EXAM'R Subclass DOCUMENT NUMBER **CLASS** DATE **COUNTRY** yes no B17 **B18 B19 B20** OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.) C13\* Desrosiers et al., "Vaccine protection against simian immunodeficiency virus infection," Proc. Natl. Acad. Sci. USA 86:6353-6357 (1989). Fahey et al., "Status of immune-based therapies in HIV infection and AIDS," Clin. exp. Immunol. 88:1-C14\* 5 (1992). Fauci et al., "Development and Evaluation of a Vaccine for Human Immunodeficiency Virus (HIV) C15\* Infection," Annals of Internal Med. 110(5):373-385 (1989). **EXAMINER** DATE CONSIDERED

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### OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

	C16*	Fox, J.L., "No Winners Against AIDS," Bio/Technology 12:128 (Feb. 1994).
	C17*	Homsy et al., "The Fc and Not CD4 Receptor Mediates Antibody Enhancement of HIV Infection in
1		Human Cells," Science 244:1357-1360 (1989).
	C18*	Hu et al., "Effect of Immunization With a Vaccinia-HIV env Recombinant on HIV Infection of
		Chimpanzees," Nature 328:721-723 (1987).

# EXAMINER DATE CONSIDERED

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(Information Disclosure Statement - Section 9 PTO-1449 (Modified) [6-1])

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# FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT(S)' INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) APPLICANT Phillip W. Berman et al. FILING DATE GROUP ART UNIT

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### U.S. PATENT DOCUMENTS

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### OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

C19 <sup>3</sup>	Hu et al., "Expression of AIDS virus envelope gene in recombinant vaccinia viruses," Nature 320:537-
	540 (1986).
C20'	Jahaverian et al., "Principal neutralizing domain of the human immunodeficiency virus type 1 envelope protein," <i>Proc. Natl. Acad. Sci. USA</i> 86:6768-6772 (1989).
C21	Kitchen et al., "Aetiology of AIDS - antibodies to human T-cell leukaemia virus (type III) in haemophiliacs," <i>Nature</i> 312:367-369 (1984).

### **EXAMINER**

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### OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.)

C22*	Krust et al., "Characterization of a monoclonal antibody specific for the HIV-1 precursor glycoprotein," AIDS 2:17-24 (1988).
C23*	Lasky, Laurence A., "Current Status of the Development of an AIDS Vaccine," Crit. Revs. in Immunology 9(3):153-172 (1989).
C24*	Lasky et al., "Delineation of a Region of the Human Immunodeficiency Virus Type 1 gp120 Glycoprotein Critical for Interaction with the CD4 Receptor," Cell 50:975-985 (1987).

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C25*	Lasky et al., "Neutralization of the AIDS Retrovirus by Antibodies to a Recombinant Envelope
	Glycoprotein," Science 233:209-212 (1986).
C26*	Letvin et al., "AIDS-like Disease in Macaque Monkeys Induced By Simian Immunodeficiency Virus: A
 	Vaccine Trial," Vaccines 87:209-213 (1987).
C27	Liou, Ruey-Shyan et al., "A Chimeric Mouse-Human Antibody That Retains Specificity For HIV gp120
	And Mediates The Lysis of HIV-Infected Cells," Journal of Immunology 143:3967-3975 (Dec. 1989).

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(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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C28*	Looney et al., "Type-Restricted Neutralization of Molecular Clones of Human Immunodeficiency Virus," Science 241:357-359 (1988).
C29*	Matsushita et al., "Characterization of a Human Immunodeficiency Virus Neutralizing Monoclonal Antibody and Mapping of the Neutralizing Epitope," Jour. of Virology 62(6):2107-2114 (1988).
C30*	Modrow et al., "Computer-Assisted Analysis of Envelope Protein Sequences of Seven Human Immunodeficiency Virus Isolates: Prediction of Antigenic Epitopes in Conserved and Variable Regions," Jour. of Virology 61(2):570-578 (1987).

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(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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	C31*	Murphy-Corb et al., "A Form Science 2:1293-1297 (1989).					caques,"		
	C32*	Newmark, Peter, "Receding H	lopes of All	OS vaccines," Nature 333:	699 (1988)				
	C33*	Palker et al., "Type-specific n env-encoded synthetic peptide	eutralizationes," <i>Proc. N</i>	n of the human immunode atl. Acad. Sci. USA 85:193	ficiency vir 32-1936 (19	us with antib 88).	odies to		
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Docket No.: 21514-704-00 US

FORM	PTO-1449	(Modified)		ATTY. DOCKET NO	٠.	SER	IAL NO.		
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C34*	Prince et al., "Failure of a Human Immunodeficiency Virus (HIV) Immune Globulin to Protect Chimpanzees Against Experimental Challenge With HIV," <i>Proc. Natl. Acad. Sci. USA</i> 85:6944-6948 (1988).
C35*	Robey et al., "Prospect for prevention of human immunodeficiency virus infection: Purified 120-kDa envelope glycoprotein induces neutralizing antibody," <i>Proc. Natl. Acad. Sci.</i> 83:7023-7027 (1986).
C36*	Robey, W.G. et al., "Characterization of envelope and core structural gene products of HTLV-III with sera from AIDS patients," <i>Science</i> 228 (4699):593-595 (May 3, 1985).

# EXAMINER DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant(s).

(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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Docket No.: 19749-701

### FORM PTO-1449 (Modified) ATTY. DOCKET NO. SERIAL NO. LIST OF PATENTS AND PUBLICATIONS FOR 14918-725 CON4 09/103,262 O I PAPPLICANT(S)' INFORMATION DISCLOSURE **STATEMENT** (Use several sheets if necessary) APPLICANT Phillip W. Berman et al. FILING DATE **GROUP ART UNIT** June 23, 1998 1643 REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS** Filing Date EXAM'R INITIAL Subclass **CLASS** DOCUMENT NUMBER DATE NAME Appropriate A121 A122 A123 A124 A125 A126 A127 A128 A129 A130 FOREIGN PATENT DOCUMENTS TRANSLAT'N EXAM'R Subclass DOCUMENT NUMBER DATE **COUNTRY CLASS** INITIAL yes no B49 B50 B51 B52 OTHER ART (Include Author, Title, Date, Pertinent Pages, etc.) Robinson, Jr. et al., "Antibody-Dependent Enhancement of Human Immunodeficiency Virus Type 1 C37\* Infection," The Lancet 790-794 (1988). Robinson, Jr. et al., "Human Monoclonal Antibodies to the Human Immunodeficiency Virus Type 1 C38\* (HIV-1) Transmembrane Glycoprotein gp41 Enhance HIV-1 Infection in vitro," Proc. Natl. Acad. Sci. USA 87:3185-3189 (1990). C39\* Rusche et al., "Antibodies That Inhibit Fusion of Human Immunodeficiency Virus-infected Cells Bind a 24-amino Acid Sequence of the Viral Envelope, gp120," Proc. Natl. Acad. Sci. USA 85:3198-3202 (1988). **EXAMINER** DATE CONSIDERED EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line

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(Information Disclosure Statement — Section 9 PTO-1449 (Modified) [6-1])

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Applicant(s).

Docket No.: 21514-704-00 US

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	C40*	Salk et al., "Control of Influer (1977).	nza and Polic	omyelitis with Killed Virus	Vaccines,"			47
	C41*	Salk, Jonas, "Prospects for the	Control of	AIDS by Immunizing Serop	ositive Ind	ividuals," /	Vature	
	C42*	Stephens et al., "A chink in H	IV's armour	?" Nature 343:219 (1990).				
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Docket No.: 19749-701

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	C43	Thiriart, Clotilde et al., "Sever Are Hidden on the Mature gp	120," <i>Journ</i>	al of Immunology 143:1832:	-1836 (Sepi	t., 1989)			
	C44*	Vandenbark et al., "Immuniza Experimental Autoimmune En	ition with a	Synthetic T-cell Receptor V relitis," <i>Nature</i> 341:541-544	-region Per (1989).	otide Protec			
•	C45*	Van Eendenburg et al., "Cell- Vaccinated With Different Va 50 (1989).	Mediated In	nmune Proliferative Respon	ses to HIV-	1 of Chimp In Retrovir	panzees uses 5(1):41-		
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	C47	Yoshida, Nobuko et al., "Metacyclic Neutralizing Effect of Monoclonal Antibody 10D8 Directed to the								
		35- and 50-Kilodalton Surface Glycoconjugates of Trypanosoma cruzi," Infection and Immunity								
		57:6:1663-1667 (June 1989).								
	C48*	Zagury et al., "Immunization Against AIDS in Humans," Nature 326:249-250 (1987).								
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